REMARKS

Reconsideration of the above-identified patent application in view of the present amendment and the following remarks is respectfully requested.

The Office Action of May 17, 2002 rejected claims 1-4, 10, 14, 17, and 22 as anticipated under 35 U.S.C. §102(b) by Ross, U.S. Patent No. 5,884,203. The Office Action rejected claims 5-9, 11-13, 15, 16, and 18-21 as obvious under 35 U.S.C. §103 over Ross in view of Thompson, U.S. Patent No. 6,020,812.

The rejection of claims 1-4, 10, 14, 17, and 22 as anticipated under 35 U.S.C. §102(b) by Ross is respectfully traversed. Anticipation under 35 U.S.C. §102(b) requires that "the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States." It is respectfully suggested that Ross fails to meet any of the criteria set forth in 35 U.S.C. §102(b). The Ross patent, upon which the rejection of all the claims is based, issued on March 16, 1999. The subject application was filed in the United States on February 1, 2000, which is less than one year after the issue date of Ross. Thus, the rejection under 35 U.S.C. §102(b) is improper and should be withdrawn.

Moreover, since Ross would only qualify as a prior art reference under 35 U.S.C. §102(e), the use of Ross in an obviousness rejection of the present invention is also improper. Thirty-five U.S.C. §103(c) states that

> (c) Subject matter developed by another person, which qualifies as prior art only under one or more of subsections (e), (f), and (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

Subsection (c) of 35 U.S.C. §103 applies to all utility patent applications filed on or after November 29, 1999. MPEP §706.02(l)(1). The present application, Serial No. 09/494,954, and Ross, U.S. Patent No. 5,884,203 were, at the time the invention of the present invention was made, owned by, or subject to an obligation of assignment to TRW, Inc. The present patent application was filed on February 1, 2000. Since Ross qualifies as prior art only under 35 U.S.C. §102(e), Ross may not be applied as prior art in an obviousness rejection under 35 U.S.C. §103. Therefore, the rejection of claims 5-9, 11-13, 15, 16, and 18-21 under 35 U.S.C. §103 is improper and should be withdrawn.

Notwithstanding the improper rejections of claims 1-22, and to expedite prosecution of the present application, this amendment amends claims 1, 10, 14, 17, and 22. It is respectfully submitted that claims 1-22 patentably define over Ross.

Ross teaches a passenger restraint system 10 for a vehicle that includes a low frequency accelerometer circuit 12 and a series of high frequency pressure transducers 16. (Ross, Col. 3, line 60 to Col. 4, line 6). The high frequency pressure transducers 16 sense high frequency signals that are generated as a result of metal being deformed during a crash

event (Ross, Col. 4, lines 2-6). The high frequency pressure transducers 16 provide an indication of crash severity (Ross, Col. 4, lines 1-26, and Col. 4, lines 49-59). The low frequency accelerometer circuit 12 provides directional information about the crash event (Ross, Col. 4, lines 59-62). A microprocessor 22 receives crash information from the high frequency pressure transducers 16 and directional information from the low frequency accelerometer circuit 12 and, in response to both, determines whether to provide a signal to an air bag firing circuit 24 (Ross, Col. 4, line 66 to Col. 5, line 6). The microprocessor 22 can provide a signal to the air bag firing circuit 24 quicker than if just the accelerometer circuit 12 was used for indicating crash severity (Ross, Col. 5, lines 3-6).

Claim 1, as amended, recites a controller that controls actuation of an occupant protection device in response to both a crash signal from a crash sensor and a safing signal from an acoustic safing sensor <u>separately</u> indicating the occurrence of a <u>deployment</u> crash event. It is respectfully submitted that Ross fails to teach or suggest this feature of claim 1. Ross teaches determining crash severity using high frequency pressure transducers 16 and determining crash direction using an accelerometer circuit 12 (Ross, Col. 4, line 49 to Col. 5, line 6). Neither one of the signals from the pressure transducers or the accelerometer are used to determine an occurrence of a deployment crash event. Ross fails to teach or suggest the high frequency pressure transducers 16 and the accelerometer circuit 12 <u>separately</u> providing signals

indicative of the occurrence of deployment crash event. In fact, Ross teaches away from using the accelerometer circuit 12 to provide a signal indicative of a deployment crash event as the crash event signal from the accelerometer circuit would not be provided as quickly as Ross desires (Ross, Col. 2, lines 10-22, and Col. 4, line 66 to Col. 5, line 6). Since Ross fails to teach or suggest this feature of claim 1, it is respectfully submitted that the rejection of claim 1 as anticipated by Ross is improper and should be withdrawn.

Claims 2-9 depend from claim 1 and are allowable for at least the same reasons as claim 1.

Claims 10, 14, 17, and 22 have been amended in a manner similar to the amendment of claim 1. Thus, it is respectfully submitted that claims 10, 14, 17, and 22 are allowable over Ross for reasons similar to claim 1.

Claims 11-13 depend from claim 10 and are allowable for at least the same reasons as claim 10. Claims 15-16 depend from claim 14 and are allowable for at least the same reasons as claim 14. Claims 18-21 depend from claim 17 and are allowable for at least the same reasons as claim 17. Therefore, it is respectfully requested that claims 1-22 be indicated as allowable.

In view of the foregoing, it is respectfully submitted that the above-identified patent application is in condition for allowance, and allowance of the above-identified patent application is respectfully requested.

Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached page is captioned **"Version with markings to show changes made."**

Please charge any deficiency or credit any overpayment in the fees for this amendment to our Deposit Account No. 20-0090.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

1. (Twice amended) A system for helping to protect a vehicle occupant, said system comprising:

a crash sensor operative to sense a vehicle crash event and provide a crash signal having a characteristic indicative of the sensed crash event;

an acoustic safing sensor operative to sense acoustic waves propagating through the vehicle structure during a vehicle crash event and provide a safing signal having a characteristic indicative of the sensed crash event;

an actuatable occupant protection device for, when actuated, helping to protect the vehicle occupant during a vehicle crash event; and

a controller which controls actuation of said occupant protection device in response to both said crash signal and said safing signal separately indicating the occurrence of a deployment crash event.

10. (Twice amended) A system for helping to protect a vehicle occupant, said system comprising:

a plurality of crash event sensors, each of said plurality of crash event sensors being operative to sense a different condition of the vehicle and to provide a corresponding sensor signal having a characteristic indicative of the vehicle condition sensed thereby;

an acoustic safing sensor operative to sense acoustic waves propagating through the vehicle structure during a vehicle crash event and to provide a safing signal having a characteristic indicative of the sensed crash event;

an occupant protection device for, when actuated, helping to protect the vehicle occupant during a vehicle crash event; and

a controller connected with each of said plurality of crash event sensors, said acoustic safing sensor, and said occupant protection device, said controller determining the occurrence of a vehicle crash event and controlling actuation of said occupant protection device in response to the sensor signal from any one of said plurality of crash event sensors and the safing signal from said acoustic safing sensor separately indicating the occurrence of a deployment crash event.

14. (Twice amended) A system for helping to protect a vehicle occupant, said system comprising:

a sensor module for mounting in a vehicle, said sensor module including:

an accelerometer operative to sense vehicle acceleration and provide an acceleration signal having a characteristic indicative of the sensed vehicle acceleration; and

an acoustic sensor operative to detect acoustic waves propagating through the vehicle structure during a vehicle crash event and to provide a safing signal having a characteristic indicative of the sensed crash event;

an occupant protection device for, when actuated, helping to protect the vehicle occupant during a vehicle crash event; and

a controller which controls actuation of said occupant protection device in response to both said acceleration signal and said safing signal separately indicating the occurrence of a deployment crash event.

17. (Twice amended) A method for controlling actuation of an actuatable occupant protection device of a vehicle, said method comprising the steps of:

sensing a vehicle crash condition;

providing [an] a crash event signal having a characteristic indicative of the sensed vehicle crash condition;

sensing acoustic waves that travel through the vehicle structure during the occurrence of the vehicle crash condition;

providing a safing signal in response to the sensed acoustic waves during the vehicle crash condition;

determining the occurrence of a vehicle crash event in response to both the crash event signal and the safing

signal separately indicating the occurrence of a vehicle crash condition; and

controlling actuation of an occupant protection device in response to said determination.

22. (Twice amended) A system for helping to protect a vehicle occupant, said system comprising:

means for sensing a vehicle crash condition and providing ~~an~~ a crash event signal having a characteristic indicative thereof;

means for sensing acoustic waves that travel through the vehicle structure in response to the occurrence of the vehicle crash condition and providing a safing signal having a characteristic indicative of a vehicle crash event; and

control means for determining the occurrence of a vehicle crash event in response to both the crash event signal and the safing signal separately indicating the occurrence of a deployment crash event and controlling actuation of an occupant protection device in response to the determination.